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## Wide-range Programmable DC power Supply

» Product specification sheet



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# Wide-range Programmable DC power Supply

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## Selection List:

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| SP20VDC600W    | 20V     | 60A     | 600W  | P01                |
| SP32VDC600W    | 32V     | 50A     | 600W  | P01                |
| SP40VDC600W    | 40V     | 40A     | 600W  | P01                |
| SP75VDC600W    | 75V     | 25A     | 600W  | P01                |
| SP150VDC600W   | 150V    | 10A     | 600W  | P01                |
| SP200VDC600W   | 200V    | 8A      | 600W  | P01                |
| SP20VDC1000W   | 20V     | 60A     | 1000W | P02                |
| SP32VDC1000W   | 32V     | 50A     | 1000W | P02                |
| SP40VDC1000W   | 40V     | 40A     | 1000W | P02                |
| SP75VDC1000W   | 75V     | 25A     | 1000W | P02                |
| SP150VDC1000W  | 150V    | 10A     | 1000W | P02                |
| SP200VDC1000W  | 200V    | 8A      | 1000W | P02                |
| SP20VDC1200W   | 20V     | 60A     | 1200W | P03                |
| SP32VDC1200W   | 32V     | 50A     | 1200W | P03                |
| SP40VDC1200W   | 40V     | 40A     | 1200W | P03                |
| SP75VDC1200W   | 75V     | 25A     | 1200W | P03                |
| SP150VDC1200W  | 150V    | 10A     | 1200W | P03                |
| SP200VDC1200W  | 200V    | 8A      | 1200W | P03                |
| SP75VDC1500W   | 75V     | 25A     | 1500W | P04                |
| SP150VDC1500W  | 150V    | 10A     | 1500W | P04                |
| SP200VDC1500W  | 200V    | 8A      | 1500W | P04                |
| SP32VDC1600W   | 32V     | 50A     | 1600W | P05                |
| SP40VDC1600W   | 40V     | 40A     | 1600W | P05                |
| SPS32VDC1000W  | 32V     | 200A    | 1000W | P06                |
| SPS40VDC1000W  | 40V     | 120A    | 1000W | P06                |
| SPS80VDC1000W  | 80V     | 60A     | 1000W | P06                |
| SPS120VDC1000W | 120V    | 40A     | 1000W | P06                |
| SPS150VDC1000W | 150V    | 30A     | 1000W | P07                |
| SPS200VDC1000W | 200V    | 24A     | 1000W | P07                |
| SPS600VDC1000W | 600V    | 10A     | 1000W | P07                |
| SPS800VDC1000W | 800V    | 7.5A    | 1000W | P07                |
| SP32VDC2000W   | 32V     | 200A    | 2000W | P08                |
| SP40VDC2000W   | 40V     | 120A    | 2000W | P08                |
| SP80VDC2000W   | 80V     | 60A     | 2000W | P08                |
| SP120VDC2000W  | 120V    | 40A     | 2000W | P08                |
| SP150VDC2000W  | 150V    | 30A     | 2000W | P09                |
| SP200VDC2000W  | 200V    | 24A     | 2000W | P09                |
| SP600VDC2000W  | 600V    | 10A     | 2000W | P09                |
| SP800VDC2000W  | 800V    | 7.5A    | 2000W | P09                |
| SP32VDC3000W   | 32V     | 200A    | 3000W | P10                |
| SP40VDC3000W   | 40V     | 120A    | 3000W | P10                |
| SP80VDC3000W   | 80V     | 60A     | 3000W | P10                |
| SP120VDC3000W  | 120V    | 40A     | 3000W | P10                |
| SP150VDC3000W  | 150V    | 30A     | 3000W | P11                |
| SP200VDC3000W  | 200V    | 24A     | 3000W | P11                |
| SP600VDC3000W  | 600V    | 10A     | 3000W | P11                |
| SP800VDC3000W  | 800V    | 7.5A    | 3000W | P11                |
| SP32VDC4000W   | 32V     | 200A    | 4000W | P12                |
| SP40VDC4000W   | 40V     | 120A    | 4000W | P12                |
| SP75VDC4000W   | 75V     | 60A     | 4000W | P12                |
| SP120VDC4000W  | 120V    | 40A     | 4000W | P12                |
| SP150VDC4000W  | 150V    | 30A     | 4000W | P13                |
| SP200VDC4000W  | 200V    | 24A     | 4000W | P13                |
| SP600VDC4000W  | 600V    | 10A     | 4000W | P13                |
| SP800VDC4000W  | 800V    | 7.5A    | 4000W | P13                |

# Wide-range Programmable DC power Supply

## 600W in 1U

| Model  | SP20VDC600W   | SP32VDC600W                             | SP40VDC600W                             | SP75VDC600W                             | SP150VDC600W                            | SP200VDC600W                            |
|--|---|---|---|---|---|---|
| <b>INPUT</b>                                   |   |   |   |   |   |   |
| Input Voltage                                  | 90~265VAC   |   |   |   |   |   |
| Input Frequency                                | 47~63Hz   |   |   |   |   |   |
| Power Factor                                   | >0.98   |   |   |   |   |   |
| Input Power                                    | 750VA(MAX)  |   |   |   |   |   |
| <b>OUTPUT</b>                                  |   |   |   |   |   |   |
| Output Voltage Range                           | 0~20V   | 0~32V                                   | 0~40V                                   | 0~75V                                   | 0~150V                                  | 0~200V                                  |
| Output Current Range                           | 0~60A   | 0~50A                                   | 0~40A                                   | 0~25A                                   | 0~10A                                   | 0~8A                                    |
| Output Power Range                             | 0~600W  |   |   |   |   |   |
| Voltage Load Regulation                        | 10mV  | 10mV                                    | 10mV                                    | 10mV                                    | 15mV                                    | 15mV                                    |
| Current Load Regulation                        | 60mA  | 50mA                                    | 40mA                                    | 25mA                                    | 10mA                                    | 8mA                                     |
| Voltage Display Resolution                     | 0.1mV   | 0.1mV                                   | 0.1mV                                   | 0.1mV                                   | 1mV                                     | 1mV                                     |
| Current Display Resolution                     | 0.2mA   | 0.2mA                                   | 0.2mA                                   | 0.2mA                                   | 0.2mA                                   | 0.1mA                                   |
| Voltage Programmable Resolution                | 1.5mV   | 1.5mV                                   | 1.5mV                                   | 1.5mV                                   | 3mV                                     | 3mV                                     |
| Current Programmable Resolution                | 2mA   | 2mA                                     | 2mA                                     | 1mA                                     | 1mA                                     | 1mA                                     |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.05%+15mV  | 0.05%+15mV                              | 0.05%+15mV                              | 0.05%+15mV                              | 0.1%+15mV                               | 0.1%+15mV                               |
| Current Setting Accuracy                       | 0.1%+60mA   | 0.1%+50mA                               | 0.1%+40mA                               | 0.1%+25mA                               | 0.1%+10mA                               | 0.1%+8mA                                |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.05%+15mV  | 0.05%+15mV                              | 0.05%+15mV                              | 0.05%+15mV                              | 0.1%+15mV                               | 0.1%+15mV                               |
| Current Measurement Accuracy                   | 0.1%+60mA   | 0.1%+50mA                               | 0.1%+40mA                               | 0.1%+25mA                               | 0.1%+10mA                               | 0.1%+8mA                                |
| Voltage Ripple <sup>[2]</sup>                  | 40mVp-p<br>6mVrms   | 40mVp-p<br>6mVrms                       | 40mVp-p<br>6mVrms                       | 40mVp-p<br>6mVrms                       | 120mVp-p<br>40mVrms                     | 120mVp-p<br>40mVrms                     |
| Current Ripple <sup>[3]</sup>                  | 60mA (Full Range)<br>20mA (TYP Value)   | 50mA (Full Range)<br>20mA (TYP Value)   | 40mA (Full Range)<br>20mA (TYP Value)   | 25mA (Full Range)<br>10mA (TYP Value)   | 40mA (Full Range)<br>10mA (TYP Value)   | 40mA (Full Range)<br>10mA (TYP Value)   |
| Line Regulation(Voltage)                       | 0.005%+1mV  | 0.005%+1mV                              | 0.005%+1mV                              | 0.005%+1mV                              | 0.02%+8mV                               | 0.02%+8mV                               |
| Line Regulation(Current)                       | 4mA   | 4mA                                     | 4mA                                     | 4mA                                     | 10mA                                    | 30mA                                    |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |   |   |   |   |   |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |   |   |   |   |   |
| DVM Resolution                                 | 0.1mV   | 0.1mV                                   | 0.1mV                                   | 0.1mV                                   | 4mV                                     | 1mV                                     |
| DVM Precision <sup>[1]</sup>                   | 0.05%+15mV  | 0.05%+15mV                              | 0.05%+15mV                              | 0.05%+15mV                              | 0.1%+30mV                               | 0.1%+15mV                               |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |   |   |   |   |   |
| Remote Compensation                            | 4V MAX  |   |   |   |   |   |
| Master-slave Control                           | Yes   |   |   |   |   |   |
| Response (Voltage Increase)                    | ≤10ms   | ≤12ms                                   | ≤10ms                                   | ≤10ms                                   | ≤25ms                                   | ≤30ms                                   |
| Response (Voltage Drop)                        | ≤150ms (no load)<br>≤20ms (full load)   | ≤150ms (no load)<br>≤20ms (full load)   | ≤150ms (no load)<br>≤20ms (full load)   | ≤160ms (no load)<br>≤20ms (full load)   | ≤400ms (no load)<br>≤32ms (full load)   | ≤600ms (no load)<br>≤30ms (full load)   |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2ms  | ≤2ms                                    | ≤2ms                                    | ≤2ms                                    | ≤3ms                                    | ≤3ms                                    |
| Command Response Time                          | 50ms  |   |   |   |   |   |
| Series Capability <sup>[6]</sup>               | Up to 10 units  | Up to 10 units                          | Up to 10 units                          | Up to 10 units                          | Up to 8 units                           | Up to 6 units                           |
| Parallel Capability                            | Up to 10 units  |   |   |   |   |   |
| Current Sharing <sup>[7]</sup>                 | 9V  | 9V                                      | 12V                                     | 20V                                     | 40V                                     | 50V                                     |
| Efficiency (full load)                         | 85%   | 86%                                     | 87%                                     | 88%                                     | 88%                                     | 87%                                     |
| <b>OTHER</b>                                   |   |   |   |   |   |   |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |   |   |   |   |   |
| Fold Back Function                             | Yes   |   |   |   |   |   |
| Input Fuse                                     | 20A, 125VAC/250VAC,<br>fast-acting type   | 30A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type | 10A, 125VAC/250VAC,<br>fast-acting type | 10A, 125VAC/250VAC,<br>fast-acting type |
| Net Weight                                     | 9.2kg   | 9.2kg                                   | 9.2kg                                   | 8.9kg                                   | 9.3kg                                   | 9.3kg                                   |
| Accessories Weight                             | 1.0kg   |   |   |   |   |   |
| Dimensions(WxHxD)                              | 483.0x44.0x531.0 mm   |   |   |   |   |   |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |   |   |   |   |   |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |   |   |   |   |   |
| Cooling Mode                                   | Forced air-cooling  |   |   |   |   |   |
| Altitude                                       | 2000m   |   |   |   |   |   |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} \cdot 2.5\% + 5\% \cdot F.S) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.



# Wide-range Programmable DC power Supply

## 1000W in 1U

| Model  | SP20VDC1000W  | SP32VDC1000W                            | SP40VDC1000W                            | SP75VDC1000W                            | SP150VDC1000W                           | SP200VDC1000W                           |
|--|---|---|---|---|---|---|
| <b>INPUT</b>                                   |   |   |   |   |   |   |
| Input Voltage                                  | 90~265VAC   |   |   |   |   |   |
| Input Frequency                                | 47~63Hz   |   |   |   |   |   |
| Power Factor                                   | >0.98   |   |   |   |   |   |
| Input Power                                    | 1300VA(MAX)   |   |   |   |   |   |
| <b>OUTPUT</b>                                  |   |   |   |   |   |   |
| Output Voltage Range                           | 0~20V   | 0~32V                                   | 0~40V                                   | 0~75V                                   | 0~150V                                  | 0~200V                                  |
| Output Current Range                           | 0~60A   | 0~50A                                   | 0~40A                                   | 0~25A                                   | 0~10A                                   | 0~8A                                    |
| Output Power Range                             | 0~1000W   |   |   |   |   |   |
| Voltage Load Regulation                        | 10mV  | 10mV                                    | 10mV                                    | 10mV                                    | 15mV                                    | 15mV                                    |
| Current Load Regulation                        | 60mA  | 50mA                                    | 40mA                                    | 25mA                                    | 10mA                                    | 8mA                                     |
| Voltage Display Resolution                     | 0.1mV   | 0.1mV                                   | 0.1mV                                   | 0.1mV                                   | 1mV                                     | 1mV                                     |
| Current Display Resolution                     | 0.2mA   | 0.2mA                                   | 0.2mA                                   | 0.2mA                                   | 0.2mA                                   | 0.1mA                                   |
| Voltage Programmable Resolution                | 1.5mV   | 1.5mV                                   | 1.5mV                                   | 1.5mV                                   | 3mV                                     | 3mV                                     |
| Current Programmable Resolution                | 2mA   | 2mA                                     | 2mA                                     | 1mA                                     | 1mA                                     | 1mA                                     |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.05%+15mV  | 0.05%+15mV                              | 0.05%+15mV                              | 0.05%+15mV                              | 0.1%+15mV                               | 0.1%+15mV                               |
| Current Setting Accuracy                       | 0.1%+60mA   | 0.1%+50mA                               | 0.1%+40mA                               | 0.1%+25mA                               | 0.1%+10mA                               | 0.1%+8mA                                |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.05%+15mV  | 0.05%+15mV                              | 0.05%+15mV                              | 0.05%+15mV                              | 0.1%+15mV                               | 0.1%+15mV                               |
| Current Measurement Accuracy                   | 0.1%+60mA   | 0.1%+50mA                               | 0.1%+40mA                               | 0.1%+25mA                               | 0.1%+10mA                               | 0.1%+8mA                                |
| Voltage Ripple <sup>[2]</sup>                  | 40mVp-p<br>6mVrms   | 40mVp-p<br>6mVrms                       | 40mVp-p<br>6mVrms                       | 40mVp-p<br>6mVrms                       | 120mVp-p<br>40mVrms                     | 120mVp-p<br>40mVrms                     |
| Current Ripple <sup>[3]</sup>                  | 60mA (Full Range)<br>20mA (TYP Value)   | 50mA (Full Range)<br>20mA (TYP Value)   | 40mA (Full Range)<br>20mA (TYP Value)   | 25mA (Full Range)<br>10mA (TYP Value)   | 40mA (Full Range)<br>10mA (TYP Value)   | 40mA (Full Range)<br>10mA (TYP Value)   |
| Line Regulation(Voltage)                       | 0.005%+1mV  | 0.005%+1mV                              | 0.005%+1mV                              | 0.005%+1mV                              | 0.02%+8mV                               | 0.02%+8mV                               |
| Line Regulation(Current)                       | 4mA   | 4mA                                     | 4mA                                     | 4mA                                     | 10mA                                    | 30mA                                    |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |   |   |   |   |   |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |   |   |   |   |   |
| DVM Resolution                                 | 0.1mV   | 0.1mV                                   | 0.1mV                                   | 0.1mV                                   | 4mV                                     | 1mV                                     |
| DVM Precision <sup>[1]</sup>                   | 0.05%+15mV  | 0.05%+15mV                              | 0.05%+15mV                              | 0.05%+15mV                              | 0.1%+30mV                               | 0.1%+15mV                               |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |   |   |   |   |   |
| Remote Compensation                            | 4V MAX  |   |   |   |   |   |
| Master-slave Control                           | Yes   |   |   |   |   |   |
| Response (Voltage Increase)                    | ≤10ms   | ≤12ms                                   | ≤10ms                                   | ≤10ms                                   | ≤25ms                                   | ≤30ms                                   |
| Response (Voltage Drop)                        | ≤150ms (no load)<br>≤20ms (full load)   | ≤150ms (no load)<br>≤15ms (full load)   | ≤150ms (no load)<br>≤15ms (full load)   | ≤160ms (no load)<br>≤15ms (full load)   | ≤400ms (no load)<br>≤25ms (full load)   | ≤600ms (no load)<br>≤40ms (full load)   |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2ms  | ≤2ms                                    | ≤2ms                                    | ≤2ms                                    | ≤3ms                                    | ≤3ms                                    |
| Command Response Time                          | 50ms  |   |   |   |   |   |
| Series Capability <sup>[6]</sup>               | Up to 10 units  | Up to 10 units                          | Up to 10 units                          | Up to 10 units                          | Up to 8 units                           | Up to 6 units                           |
| Parallel Capability                            | Up to 10 units  |   |   |   |   |   |
| Current Sharing <sup>[7]</sup>                 | 9V  | 9V                                      | 12V                                     | 20V                                     | 40V                                     | 50V                                     |
| Efficiency (full load)                         | 85%   | 89%                                     | 89%                                     | 89%                                     | 89%                                     | 87%                                     |
| <b>OTHER</b>                                   |   |   |   |   |   |   |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |   |   |   |   |   |
| Fold Back Function                             | Yes   |   |   |   |   |   |
| Input Fuse                                     | 20A, 125VAC/250VAC,<br>fast-acting type   | 30A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type |
| Net Weight                                     | 9.2kg   | 9.2kg                                   | 9.2kg                                   | 8.9kg                                   | 9.3kg                                   | 9.3kg                                   |
| Accessories Weight                             | 1.0kg   |   |   |   |   |   |
| Dimensions(WxHxD)                              | 483.0x44.0x531.0 mm   |   |   |   |   |   |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |   |   |   |   |   |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |   |   |   |   |   |
| Cooling Mode                                   | Forced air-cooling  |   |   |   |   |   |
| Altitude                                       | 2000m   |   |   |   |   |   |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_{e} < (I_{av} \cdot 2.5\% + 5\% \cdot F.S) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# Wide-range Programmable DC power Supply

## 1200W in 1U

| Model  | SP20VDC1200W  | SP32VDC1200W                            | SP40VDC1200W                            | SP75VDC1200W                            | SP150VDC1200W                           | SP200VDC1200W                           |
|--|---|---|---|---|---|---|
| <b>INPUT</b>                                   |   |   |   |   |   |   |
| Input Voltage                                  | 90~265VAC   |   |   |   |   |   |
| Input Frequency                                | 47~63Hz   |   |   |   |   |   |
| Power Factor                                   | >0.98   |   |   |   |   |   |
| Input Power                                    | 1500VA(MAX)   |   |   |   |   |   |
| <b>OUTPUT</b>                                  |   |   |   |   |   |   |
| Output Voltage Range                           | 0~20V   | 0~32V                                   | 0~40V                                   | 0~75V                                   | 0~150V                                  | 0~200V                                  |
| Output Current Range                           | 0~60A   | 0~50A                                   | 0~40A                                   | 0~25A                                   | 0~10A                                   | 0~8A                                    |
| Output Power Range                             | 0~1200W   |   |   |   |   |   |
| Voltage Load Regulation                        | 10mV  | 10mV                                    | 10mV                                    | 10mV                                    | 15mV                                    | 15mV                                    |
| Current Load Regulation                        | 60mA  | 50mA                                    | 40mA                                    | 25mA                                    | 10mA                                    | 8mA                                     |
| Voltage Display Resolution                     | 0.1mV   | 0.1mV                                   | 0.1mV                                   | 0.1mV                                   | 1mV                                     | 1mV                                     |
| Current Display Resolution                     | 0.2mA   | 0.2mA                                   | 0.2mA                                   | 0.2mA                                   | 0.2mA                                   | 0.1mA                                   |
| Voltage Programmable Resolution                | 1.5mV   | 1.5mV                                   | 1.5mV                                   | 1.5mV                                   | 3mV                                     | 3mV                                     |
| Current Programmable Resolution                | 2mA   | 2mA                                     | 2mA                                     | 1mA                                     | 1mA                                     | 1mA                                     |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.05%+15mV  | 0.05%+15mV                              | 0.05%+15mV                              | 0.05%+15mV                              | 0.1%+15mV                               | 0.1%+15mV                               |
| Current Setting Accuracy                       | 0.1%+60mA   | 0.1%+50mA                               | 0.1%+40mA                               | 0.1%+25mA                               | 0.1%+10mA                               | 0.1%+8mA                                |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.05%+15mV  | 0.05%+15mV                              | 0.05%+15mV                              | 0.05%+15mV                              | 0.1%+15mV                               | 0.1%+15mV                               |
| Current Measurement Accuracy                   | 0.1%+60mA   | 0.1%+50mA                               | 0.1%+40mA                               | 0.1%+25mA                               | 0.1%+10mA                               | 0.1%+8mA                                |
| Voltage Ripple <sup>[2]</sup>                  | 40mVp-p<br>6mVrms   | 40mVp-p<br>6mVrms                       | 40mVp-p<br>6mVrms                       | 40mVp-p<br>6mVrms                       | 120mVp-p<br>40mVrms                     | 120mVp-p<br>40mVrms                     |
| Current Ripple <sup>[3]</sup>                  | 60mA (Full Range)<br>20mA (TYP Value)   | 50mA (Full Range)<br>20mA (TYP Value)   | 40mA (Full Range)<br>20mA (TYP Value)   | 25mA (Full Range)<br>10mA (TYP Value)   | 40mA (Full Range)<br>10mA (TYP Value)   | 40mA (Full Range)<br>10mA (TYP Value)   |
| Line Regulation(Voltage)                       | 0.005%+1mV  | 0.005%+1mV                              | 0.005%+1mV                              | 0.005%+1mV                              | 0.02%+8mV                               | 0.02%+8mV                               |
| Line Regulation(Current)                       | 4mA   | 4mA                                     | 4mA                                     | 4mA                                     | 10mA                                    | 30mA                                    |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |   |   |   |   |   |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |   |   |   |   |   |
| DVM Resolution                                 | 0.1mV   | 0.1mV                                   | 0.1mV                                   | 0.1mV                                   | 4mV                                     | 1mV                                     |
| DVM Precision <sup>[1]</sup>                   | 0.05%+15mV  | 0.05%+15mV                              | 0.05%+15mV                              | 0.05%+15mV                              | 0.1%+30mV                               | 0.1%+15mV                               |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |   |   |   |   |   |
| Remote Compensation                            | 4V MAX  |   |   |   |   |   |
| Master-slave Control                           | Yes   |   |   |   |   |   |
| Response (Voltage Increase)                    | ≤10ms   | ≤10ms                                   | ≤10ms                                   | ≤10ms                                   | ≤25ms                                   | ≤30ms                                   |
| Response (Voltage Drop)                        | ≤150ms (no load)<br>≤12ms (full load)   | ≤150ms (no load)<br>≤12ms (full load)   | ≤150ms (no load)<br>≤12ms (full load)   | ≤160ms (no load)<br>≤12ms (full load)   | ≤400ms (no load)<br>≤21ms (full load)   | ≤600ms (no load)<br>≤36ms (full load)   |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2ms  | ≤2ms                                    | ≤2ms                                    | ≤2ms                                    | ≤3ms                                    | ≤3ms                                    |
| Command Response Time                          | 50ms  |   |   |   |   |   |
| Series Capability <sup>[6]</sup>               | Up to 10 units  | Up to 10 units                          | Up to 10 units                          | Up to 10 units                          | Up to 8 units                           | Up to 6 units                           |
| Parallel Capability                            | Up to 10 units  |   |   |   |   |   |
| Current Sharing <sup>[7]</sup>                 | 9V  | 9V                                      | 12V                                     | 20V                                     | 40V                                     | 50V                                     |
| Efficiency (full load)                         | 84%   | 84%                                     | 89%                                     | 90%                                     | 89%                                     | 90%                                     |
| <b>OTHER</b>                                   |   |   |   |   |   |   |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |   |   |   |   |   |
| Fold Back Function                             | Yes   |   |   |   |   |   |
| Input Fuse                                     | 20A, 125VAC/250VAC,<br>fast-acting type   | 20A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type |
| Net Weight                                     | 9.2kg   | 9.2kg                                   | 9.2kg                                   | 8.9kg                                   | 9.3kg                                   | 9.3kg                                   |
| Accessories Weight                             | 1.0kg   |   |   |   |   |   |
| Dimensions(WxHxD)                              | 483.0x44.0x531.0 mm   |   |   |   |   |   |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |   |   |   |   |   |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |   |   |   |   |   |
| Cooling Mode                                   | Forced air-cooling  |   |   |   |   |   |
| Altitude                                       | 2000m   |   |   |   |   |   |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_e < (I_{av} \cdot 2.5\% + 5\% \cdot F.S) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# Wide-range Programmable DC power Supply

## 1500W in 1U

| Model  | SP75VDC1500W  | SP150VDC1500W                         | SP200VDC1500W                         |
|--|---|---------------------------------------|---------------------------------------|
| <b>INPUT</b>                                   |   |                                       |                                       |
| Input Voltage                                  | 90~265VAC   |                                       |                                       |
| Input Frequency                                | 47~63Hz   |                                       |                                       |
| Power Factor                                   | >0.98   |                                       |                                       |
| Input Power                                    | 1900VA(MAX)   |                                       |                                       |
| <b>OUTPUT</b>                                  |   |                                       |                                       |
| Output Voltage Range                           | 0~75V   | 0~150V                                | 0~200V                                |
| Output Current Range                           | 0~25A   | 0~10A                                 | 0~8A                                  |
| Output Power Range                             | 0~1500W   |                                       |                                       |
| Voltage Load Regulation                        | 10mV  | 15mV                                  | 15mV                                  |
| Current Load Regulation                        | 25mA  | 10mA                                  | 8mA                                   |
| Voltage Display Resolution                     | 0.1mV   | 1mV                                   | 1mV                                   |
| Current Display Resolution                     | 1.5mA   | 0.2mA                                 | 0.1mA                                 |
| Voltage Programmable Resolution                | 3mV   | 3mV                                   | 3mV                                   |
| Current Programmable Resolution                | 1mA   | 1mA                                   | 1mA                                   |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.05%+15mV  | 0.05%+15mV                            | 0.05%+15mV                            |
| Current Setting Accuracy                       | 0.1%+25mA   | 0.1%+10mA                             | 0.1%+8mA                              |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.05%+15mV  | 0.1%+15mV                             | 0.1%+15mV                             |
| Current Measurement Accuracy                   | 0.1%+25mA   | 0.1%+10mA                             | 0.1%+8mA                              |
| Voltage Ripple <sup>[2]</sup>                  | 40mVp-p<br>6mVrms   | 120mVp-p<br>40mVrms                   | 120mVp-p<br>40mVrms                   |
| Current Ripple <sup>[3]</sup>                  | 25mA (Full Range)<br>10mA (TYP Value)   | 40mA (Full Range)<br>10mA (TYP Value) | 40mA (Full Range)<br>10mA (TYP Value) |
| Line Regulation(Voltage)                       | 0.005%+2mV  | 0.02%+8mV                             | 0.02%+8mV                             |
| Line Regulation(Current)                       | 4mA   | 10mA                                  | 30mA                                  |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |                                       |                                       |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |                                       |                                       |
| DVM Resolution                                 | 0.1mV   | 4mV                                   | 1mV                                   |
| DVM Precision <sup>[1]</sup>                   | 0.05%+15mV  | 0.1%+30mV                             | 0.1%+15mV                             |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |                                       |                                       |
| Remote Compensation                            | 4V MAX  |                                       |                                       |
| Master-slave Control                           | Yes   |                                       |                                       |
| Response (Voltage Increase)                    | ≤10ms   | ≤25ms                                 | ≤30ms                                 |
| Response (Voltage Drop)                        | ≤160ms (no load)<br>≤10ms (full load)   | ≤400ms (no load)<br>≤18ms (full load) | ≤600ms (no load)<br>≤30ms (full load) |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2ms  | ≤3ms                                  | ≤3ms                                  |
| Command Response Time                          | 50ms  |                                       |                                       |
| Series Capability <sup>[6]</sup>               | Up to 10 units  | Up to 8 units                         | Up to 6 units                         |
| Parallel Capability                            | Up to 10 units  |                                       |                                       |
| Current Sharing <sup>[7]</sup>                 | 20V   | 40V                                   | 50V                                   |
| Efficiency (full load)                         | 91%   | 90%                                   | 91%                                   |
| <b>OTHER</b>                                   |   |                                       |                                       |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |                                       |                                       |
| Fold Back Function                             | Yes   |                                       |                                       |
| Input Fuse                                     | 30A, 125VAC/250VAC, fast-acting type  |                                       |                                       |
| Net Weight                                     | 8.9kg   | 9.3kg                                 | 9.3kg                                 |
| Accessories Weight                             | 1.0kg   |                                       |                                       |
| Dimensions(WxHxD)                              | 483.0x44.0x531.0 mm   |                                       |                                       |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |                                       |                                       |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |                                       |                                       |
| Cooling Mode                                   | Forced air-cooling  |                                       |                                       |
| Altitude                                       | 2000m   |                                       |                                       |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_{e} < (I_{av} \cdot 2.5\% + 5\% \cdot F.S) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# Wide-range Programmable DC power Supply

## 1600W in 1U

| Model  | SP32VDC1600W  | SP40VDC1600W                          |
|--|---|---------------------------------------|
| <b>INPUT</b>                                   |   |                                       |
| Input Voltage                                  | 90~265VAC   |                                       |
| Input Frequency                                | 47~63Hz   |                                       |
| Power Factor                                   | >0.98   |                                       |
| Input Power                                    | 2000VA(MAX)   |                                       |
| <b>OUTPUT</b>                                  |   |                                       |
| Output Voltage Range                           | 0~32V   | 0~40V                                 |
| Output Current Range                           | 0~50A   | 0~40A                                 |
| Output Power Range                             | 0~1600W   |                                       |
| Voltage Load Regulation                        | 10mV  |                                       |
| Current Load Regulation                        | 50mA  | 40mA                                  |
| Voltage Display Resolution                     | 0.1mV   |                                       |
| Current Display Resolution                     | 0.2mA   |                                       |
| Voltage Programmable Resolution                | 1.5mV   |                                       |
| Current Programmable Resolution                | 2mA   |                                       |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.05%+15mV  |                                       |
| Current Setting Accuracy                       | 0.1%+50mA   | 0.1%+40mA                             |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.05%+15mV  |                                       |
| Current Measurement Accuracy                   | 0.1%+50mA   | 0.1%+40mA                             |
| Voltage Ripple <sup>[2]</sup>                  | 40mVp-p<br>6mVrms   |                                       |
| Current Ripple <sup>[3]</sup>                  | 50mA (Full Range)<br>20mA (TYP Value)   | 40mA (Full Range)<br>20mA (TYP Value) |
| Line Regulation(Voltage)                       | 0.005%+1mV  |                                       |
| Line Regulation(Current)                       | 4mA   |                                       |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |                                       |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |                                       |
| DVM Resolution                                 | 0.1mV   |                                       |
| DVM Precision <sup>[1]</sup>                   | 0.05%+15mV  |                                       |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |                                       |
| Remote Compensation                            | 4V MAX  |                                       |
| Master-slave Control                           | Yes   |                                       |
| Response (Voltage Increase)                    | ≤12ms   | ≤10ms                                 |
| Response (Voltage Drop)                        | ≤150ms (no load)<br>≤10ms (full load)   |                                       |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2ms  |                                       |
| Command Response Time                          | 50ms  |                                       |
| Series Capability <sup>[6]</sup>               | Up to 10 units  |                                       |
| Parallel Capability                            | Up to 10 units  |                                       |
| Current Sharing <sup>[7]</sup>                 | 9V  | 12V                                   |
| Efficiency (full load)                         | 89%   | 90%                                   |
| <b>OTHER</b>                                   |   |                                       |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |                                       |
| Fold Back Function                             | Yes   |                                       |
| Input Fuse                                     | 30A, 125VAC/250VAC,<br>fast-acting type   |                                       |
| Net Weight                                     | 9.2kg   |                                       |
| Accessories Weight                             | 1.0kg   |                                       |
| Dimensions(WxHxD)                              | 483.0x44.0x531.0 mm   |                                       |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |                                       |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |                                       |
| Cooling Mode                                   | Forced air-cooling  |                                       |
| Altitude                                       | 2000m   |                                       |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $le<(\text{Iav} \cdot 2.5\% + 5\% \text{ F.S}) \text{ A}$ , F.S is the full scale of the current.  $\text{Iav} = \text{Isum}/n$ , where Iav is average current, Isum is total current and n is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# 05

Efficiency, Stability, Reliable, Precision



# Wide-range Programmable DC power Supply

## 1000W in 2U(1)

| Model  | SPS32VDC1000W   | SPS40VDC1000W                          | SPS80VDC1000W                         | SPS120VDC1000W                        |
|--|---|--|---------------------------------------|---------------------------------------|
| <b>INPUT</b>                                   |   |  |                                       |                                       |
| Input Voltage                                  | 90~265VAC   |  |                                       |                                       |
| Input Frequency                                | 47~63Hz   |  |                                       |                                       |
| Power Factor                                   | >0.98   | >0.98                                  | >0.97                                 | >0.98                                 |
| Input Power                                    | 1500VA(MAX)   | 1300VA(MAX)                            | 1200VA(MAX)                           | 1300VA(MAX)                           |
| <b>OUTPUT</b>                                  |   |  |                                       |                                       |
| Output Voltage Range                           | 0~32V   | 0~40V                                  | 0~80V                                 | 0~120V                                |
| Output Current Range                           | 0~200A  | 0~120A                                 | 0~60A                                 | 0~40A                                 |
| Output Power Range                             | 0~1000W   |  |                                       |                                       |
| Voltage Load Regulation                        | 30mV  | 15mV                                   | 15mV                                  | 15mV                                  |
| Current Load Regulation                        | 200mA   | 120mA                                  | 60mA                                  | 40mA                                  |
| Voltage Display Resolution                     | 0.1mV   | 0.1mV                                  | 0.1mV                                 | 1mV                                   |
| Current Display Resolution                     | 1mA   | 1mA                                    | 0.2mA                                 | 0.1mA                                 |
| Voltage Programmable Resolution                | 1mV   | 1mV                                    | 1.5mV                                 | 3mV                                   |
| Current Programmable Resolution                | 6mA   | 3mA                                    | 2mA                                   | 1mA                                   |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.05%+15mV  | 0.05%+15mV                             | 0.05%+15mV                            | 0.1%+15mV                             |
| Current Setting Accuracy                       | 0.1%+200mA  | 0.1%+120mA                             | 0.1%+60mA                             | 0.1%+40mA                             |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.05%+15mV  | 0.05%+15mV                             | 0.05%+15mV                            | 0.1%+15mV                             |
| Current Measurement Accuracy                   | 0.1%+200mA  | 0.1%+120mA                             | 0.1%+60mA                             | 0.1%+40mA                             |
| Voltage Ripple <sup>[2]</sup>                  | 60mVp-p<br>10mVrms  | 40mVp-p<br>6mVrms                      | 40mVp-p<br>6mVrms                     | 80mVp-p<br>15mVrms                    |
| Current Ripple <sup>[3]</sup>                  | 400mA (Full Range)<br>200mA (TYP Value)   | 150mA (Full Range)<br>20mA (TYP Value) | 50mA (Full Range)<br>10mA (TYP Value) | 60mA (Full Range)<br>10mA (TYP Value) |
| Line Regulation(Voltage)                       | 0.01%+8mV   | 0.02%+8mV                              | 0.01%+8mV                             | 0.02%+8mV                             |
| Line Regulation(Current)                       | 200mA   | 30mA                                   | 30mA                                  | 40mA                                  |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |  |                                       |                                       |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |  |                                       |                                       |
| DVM Resolution                                 | 0.1mV   | 0.1mV                                  | 0.1mV                                 | 1mV                                   |
| DVM Precision <sup>[1]</sup>                   | 0.05%+15mV  | 0.05%+15mV                             | 0.05%+15mV                            | 0.1%+15mV                             |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |  |                                       |                                       |
| Remote Compensation                            | 4V MAX  | 4V MAX                                 | 4V MAX                                | 5V MAX                                |
| Master-slave Control                           | Yes   |  |                                       |                                       |
| Response (Voltage Increase)                    | ≤20ms (no load)<br>≤40ms (full load)  | ≤10ms                                  | ≤15ms                                 | ≤20ms                                 |
| Response (Voltage Drop)                        | ≤500ms (no load)<br>≤45ms (full load)   | ≤350ms (no load)<br>≤10ms (full load)  | ≤450ms (no load)<br>≤30ms (full load) | ≤350ms (no load)<br>≤21ms (full load) |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2ms  |  |                                       |                                       |
| Command Response Time                          | 50ms  |  |                                       |                                       |
| Series Capability <sup>[6]</sup>               | Up to 10 units  |  |                                       |                                       |
| Parallel Capability                            | Up to 10 units  |  |                                       |                                       |
| Current Sharing <sup>[7]</sup>                 | 12V   | 12V                                    | 20V                                   | 30V                                   |
| Efficiency (full load)                         | 85%   | 87%                                    | 89%                                   | 88%                                   |
| <b>OTHER</b>                                   |   |  |                                       |                                       |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |  |                                       |                                       |
| Fold Back Function                             | No(customers can purchase other accessories to achieve this function, please consult the salesrepresentative for details) | Yes                                    | Yes                                   | Yes                                   |
| Input Fuse                                     | 20A, 125VAC/250VAC, fast-acting type  | 30A, 125VAC/250VAC, fast-acting type   | 30A, 125VAC/250VAC, fast-acting type  | 30A, 125VAC/250VAC, fast-acting type  |
| Net Weight                                     | 14.7kg  | 14.7kg                                 | 13.2kg                                | 13.2kg                                |
| Accessories Weight                             | 1.0kg   |  |                                       |                                       |
| Dimensions(WxHxD)                              | 483.0x87.0x626.0 mm   | 483.0x87.0x626.0 mm                    | 483.0x87.0x581.0 mm                   | 483.0x87.0x581.0 mm                   |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |  |                                       |                                       |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |  |                                       |                                       |
| Cooling Mode                                   | Forced air-cooling  |  |                                       |                                       |
| Altitude                                       | 2000m   |  |                                       |                                       |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_{e} < (I_{av} \cdot 2.5\% + 5\% \cdot F.S) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# Wide-range Programmable DC power Supply

## 1000W in 2U(2)

| Model  | SPS150VDC1000W  | SPS200VDC1000W                        | SPS600VDC1000W                         | SPS800VDC1000W                        |
|--|---|---------------------------------------|--|---------------------------------------|
| <b>INPUT</b>                                   |   |                                       |  |                                       |
| Input Voltage                                  | 90~265VAC   |                                       |  |                                       |
| Input Frequency                                | 47~63Hz   |                                       |  |                                       |
| Power Factor                                   | >0.98   |                                       |  |                                       |
| Input Power                                    | 1300VA(MAX)   |                                       |  |                                       |
| <b>OUTPUT</b>                                  |   |                                       |  |                                       |
| Output Voltage Range                           | 0~150V  | 0~200V                                | 0~600V                                 | 0~800V                                |
| Output Current Range                           | 0~30A   | 0~24A                                 | 0~10A                                  | 0~7.5A                                |
| Output Power Range                             | 0~1000W   |                                       |  |                                       |
| Voltage Load Regulation                        | 15mV  | 15mV                                  | 30mV                                   | 200mV                                 |
| Current Load Regulation                        | 30mA  | 24mA                                  | 10mA                                   | 20mA                                  |
| Voltage Display Resolution                     | 1mV   |                                       |  |                                       |
| Current Display Resolution                     | 0.1mA   |                                       |  |                                       |
| Voltage Programmable Resolution                | 3mV   | 4mV                                   | 12mV                                   | 24mV                                  |
| Current Programmable Resolution                | 1mA   |                                       |  |                                       |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.1%+15mV   | 0.1%+15mV                             | 0.05%+150mV                            | 0.05%+200mV                           |
| Current Setting Accuracy                       | 0.1%+30mA   | 0.1%+24mA                             | 0.1%+10mA                              | 0.1%+7.5mA                            |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.1%+15mV   | 0.1%+15mV                             | 0.05%+150mV                            | 0.05%+200mV                           |
| Current Measurement Accuracy                   | 0.1%+30mA   | 0.1%+24mA                             | 0.1%+10mA                              | 0.1%+7.5mA                            |
| Voltage Ripple <sup>[2]</sup>                  | 80mVp-p<br>15mVrms  | 150mVp-p<br>30mVrms                   | 350mVp-p<br>40mVrms                    | 800mVp-p<br>200mVrms                  |
| Current Ripple <sup>[3]</sup>                  | 60mA (Full Range)<br>10mA (TYP Value)   | 50mA (Full Range)<br>20mA (TYP Value) | 25mA (Full Range)<br>10mA (TYP Value)  | 25mA (Full Range)<br>10mA (TYP Value) |
| Line Regulation(Voltage)                       | 0.02%+8mV   | 0.02%+8mV                             | 0.01%+308mV                            | 0.01%+40mV                            |
| Line Regulation(Current)                       | 30mA  | 30mA                                  | 15mA                                   | 15mA                                  |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |                                       |  |                                       |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |                                       |  |                                       |
| DVM Resolution                                 | 1mV   | 1mV                                   | 12mV                                   | 12mV                                  |
| DVM Precision <sup>[1]</sup>                   | 0.1%+15mV   | 0.1%+15mV                             | 0.05%+150mV                            | 0.05%+200mV                           |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |                                       |  |                                       |
| Remote Compensation                            | 5V MAX  |                                       |  |                                       |
| Master-slave Control                           | Yes   |                                       |  |                                       |
| Response (Voltage Increase)                    | ≤25ms   | ≤30ms                                 | ≤60ms                                  | ≤60ms                                 |
| Response (Voltage Drop)                        | ≤500ms (no load)<br>≤25ms (full load)   | ≤500ms (no load)<br>≤35ms (full load) | ≤800ms (no load)<br>≤110ms (full load) | ≤800ms (no load)<br>≤60ms (full load) |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2ms  | ≤2ms                                  | ≤3ms                                   | ≤3ms                                  |
| Command Response Time                          | 50ms  |                                       |  |                                       |
| Series Capability <sup>[6]</sup>               | Up to 8 units   | Up to 6 units                         | Up to 2 units                          | Not Recommended                       |
| Parallel Capability                            | Up to 10 units  |                                       |  |                                       |
| Current Sharing <sup>[7]</sup>                 | 40V   | 50V                                   | 200V                                   | 250V                                  |
| Efficiency (full load)                         | 88%   | 88%                                   | 86%                                    | 85%                                   |
| <b>OTHER</b>                                   |   |                                       |  |                                       |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |                                       |  |                                       |
| Fold Back Function                             | Yes   |                                       |  |                                       |
| Input Fuse                                     | 30A, 125VAC/250VAC, fast-acting type  |                                       |  |                                       |
| Net Weight                                     | 13.2kg  | 14.7kg                                | 13.2kg                                 | 13.2kg                                |
| Accessories Weight                             | 1.0kg   |                                       |  |                                       |
| Dimensions(WxHxD)                              | 483.0x87.0x581.0 mm   | 483.0x87.0x581.0 mm                   | 483.0x87.0x626.0 mm                    | 483.0x87.0x626.0 mm                   |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |                                       |  |                                       |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |                                       |  |                                       |
| Cooling Mode                                   | Forced air-cooling  |                                       |  |                                       |
| Altitude                                       | 2000m   |                                       |  |                                       |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $le<(\text{lav} \cdot 2.5\% + 5\% \text{ F.S}) \text{ A}$ , F.S is the full scale of the current.  $\text{lav} = \text{lsum}/n$ , where lav is average current, lsum is total current and n is number of parallel units. Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# Wide-range Programmable DC power Supply

## 2000W in 2U(1)

| Model  | SP32VDC2000W  | SP40VDC2000W                           | SP80VDC2000W                          | SP120VDC2000W                         |
|--|---|--|---------------------------------------|---------------------------------------|
| <b>INPUT</b>                                   |   |  |                                       |                                       |
| Input Voltage                                  | 190~265VAC  |  |                                       |                                       |
| Input Frequency                                | 47~63Hz   |  |                                       |                                       |
| Power Factor                                   | >0.98   |  |                                       |                                       |
| Input Power                                    | 2600VA(MAX)   | 2400VA(MAX)                            | 2400VA(MAX)                           | 2400VA(MAX)                           |
| <b>OUTPUT</b>                                  |   |  |                                       |                                       |
| Output Voltage Range                           | 0~32V   | 0~40V                                  | 0~80V                                 | 0~120V                                |
| Output Current Range                           | 0~200A  | 0~120A                                 | 0~60A                                 | 0~40A                                 |
| Output Power Range                             | 0~2000W   |  |                                       |                                       |
| Voltage Load Regulation                        | 30mV  | 15mV                                   | 15mV                                  | 15mV                                  |
| Current Load Regulation                        | 200mA   | 120mA                                  | 60mA                                  | 40mA                                  |
| Voltage Display Resolution                     | 0.1mV   | 0.1mV                                  | 0.1mV                                 | 1mV                                   |
| Current Display Resolution                     | 1mA   |  | 0.2mA                                 | 0.1mA                                 |
| Voltage Programmable Resolution                | 1mV   | 1mV                                    | 1.5mV                                 | 3mV                                   |
| Current Programmable Resolution                | 6mA   | 3mA                                    | 2mA                                   | 1mA                                   |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.05%+15mV  | 0.05%+15mV                             | 0.05%+15mV                            | 0.1%+15mV                             |
| Current Setting Accuracy                       | 0.1%+200mA  | 0.1%+120mA                             | 0.1%+60mA                             | 0.1%+40mA                             |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.05%+15mV  | 0.05%+15mV                             | 0.05%+15mV                            | 0.1%+15mV                             |
| Current Measurement Accuracy                   | 0.1%+200mA  | 0.1%+120mA                             | 0.1%+60mA                             | 0.1%+40mA                             |
| Voltage Ripple <sup>[2]</sup>                  | 60mVp-p<br>10mVrms  | 40mVp-p<br>6mVrms                      | 40mVp-p<br>6mVrms                     | 80mVp-p<br>15mVrms                    |
| Current Ripple <sup>[3]</sup>                  | 400mA (Full Range)<br>200mA (TYP Value)   | 150mA (Full Range)<br>20mA (TYP Value) | 50mA (Full Range)<br>10mA (TYP Value) | 60mA (Full Range)<br>10mA (TYP Value) |
| Line Regulation(Voltage)                       | 0.01%+8mV   | 0.01%+8mV                              | 0.01%+8mV                             | 0.02%+8mV                             |
| Line Regulation(Current)                       | 200mA   | 30mA                                   | 30mA                                  | 30mA                                  |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |  |                                       |                                       |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |  |                                       |                                       |
| DVM Resolution                                 | 0.1mV   | 0.1mV                                  | 0.1mV                                 | 1mV                                   |
| DVM Precision <sup>[1]</sup>                   | 0.05%+15mV  | 0.05%+15mV                             | 0.05%+15mV                            | 0.1%+15mV                             |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |  |                                       |                                       |
| Remote Compensation                            | 4V MAX  | 4V MAX                                 | 4V MAX                                | 5V MAX                                |
| Master-slave Control                           | Yes   |  |                                       |                                       |
| Response (Voltage Increase)                    | ≤20ms (no load)<br>≤30ms (full load)  | ≤10ms                                  | ≤15ms                                 | ≤20ms                                 |
| Response (Voltage Drop)                        | ≤500ms (no load)<br>≤30ms (full load)   | ≤350ms (no load)<br>≤10ms (full load)  | ≤450ms (no load)<br>≤30ms (full load) | ≤350ms (no load)<br>≤21ms (full load) |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2ms  |  | ≤2ms                                  | ≤3ms                                  |
| Command Response Time                          | 50ms  |  |                                       |                                       |
| Series Capability <sup>[6]</sup>               | Up to 10 units  | Up to 10 units                         | Up to 10 units                        | Up to 8 units                         |
| Parallel Capability                            | Up to 10 units  |  |                                       |                                       |
| Current Sharing <sup>[7]</sup>                 | 12V   | 12V                                    | 20V                                   | 30V                                   |
| Efficiency (full load)                         | 91%   | 88%                                    | 89%                                   | 89%                                   |
| <b>OTHER</b>                                   |   |  |                                       |                                       |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |  |                                       |                                       |
| Fold Back Function                             | No(customers can purchase other accessories to achieve this function, please consult the salesrepresentative for details) | Yes                                    | Yes                                   | Yes                                   |
| Input Fuse                                     | 20A, 125VAC/250VAC, fast-acting type  | 30A, 125VAC/250VAC, fast-acting type   | 30A, 125VAC/250VAC, fast-acting type  | 30A, 125VAC/250VAC, fast-acting type  |
| Net Weight                                     | 14.7kg  | 14.7kg                                 | 13.2kg                                | 13.2kg                                |
| Accessories Weight                             | 1.0kg   |  |                                       |                                       |
| Dimensions(WxHxD)                              | 483.0x87.0x626.0 mm   | 483.0x87.0x626.0 mm                    | 483.0x87.0x581.0 mm                   | 483.0x87.0x581.0 mm                   |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |  |                                       |                                       |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |  |                                       |                                       |
| Cooling Mode                                   | Forced air-cooling  |  |                                       |                                       |
| Altitude                                       | 2000m   |  |                                       |                                       |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_{e} < (I_{av} \cdot 2.5\% + 5\% \cdot F.S) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# Wide-range Programmable DC power Supply

## 2000W in 2U(2)

| Model  | SP150VDC2000W   | SP200VDC2000W                           | SP600VDC2000W                           | SP800VDC2000W                           |
|--|---|---|---|---|
| <b>INPUT</b>                                   |   |   |   |   |
| Input Voltage                                  | 190~265VAC  |   |   |   |
| Input Frequency                                | 47~63Hz   |   |   |   |
| Power Factor                                   | >0.98   |   |   |   |
| Input Power                                    | 2400VA(MAX)   |   |   |   |
| <b>OUTPUT</b>                                  |   |   |   |   |
| Output Voltage Range                           | 0~150V  | 0~200V                                  | 0~600V                                  | 0~800V                                  |
| Output Current Range                           | 0~30A   | 0~24A                                   | 0~10A                                   | 0~7.5A                                  |
| Output Power Range                             | 0~2000W   |   |   |   |
| Voltage Load Regulation                        | 15mV  | 15mV                                    | 30mV                                    | 200mV                                   |
| Current Load Regulation                        | 30mA  | 24mA                                    | 10mA                                    | 20mA                                    |
| Voltage Display Resolution                     | 1mV   |   |   |   |
| Current Display Resolution                     | 0.1mA   |   |   |   |
| Voltage Programmable Resolution                | 3mV   | 4mV                                     | 12mV                                    | 24mV                                    |
| Current Programmable Resolution                | 1mA   |   |   |   |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.1%+15mV   | 0.1%+15mV                               | 0.05%+150mV                             | 0.05%+200mV                             |
| Current Setting Accuracy                       | 0.1%+30mA   | 0.1%+24mA                               | 0.1%+10mA                               | 0.1%+7.5mA                              |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.1%+15mV   | 0.1%+15mV                               | 0.05%+150mV                             | 0.05%+200mV                             |
| Current Measurement Accuracy                   | 0.1%+30mA   | 0.1%+24mA                               | 0.1%+10mA                               | 0.1%+7.5mA                              |
| Voltage Ripple <sup>[2]</sup>                  | 40mVp-p<br>6mVrms   | 150mVp-p<br>30mVrms                     | 350mVp-p<br>40mVrms                     | 800mVp-p<br>200mVrms                    |
| Current Ripple <sup>[3]</sup>                  | 60mA (Full Range)<br>10mA (TYP Value)   | 50mA (Full Range)<br>20mA (TYP Value)   | 25mA (Full Range)<br>10mA (TYP Value)   | 25mA (Full Range)<br>10mA (TYP Value)   |
| Line Regulation(Voltage)                       | 0.02%+8mV   | 0.02%+8mV                               | 0.01%+30mV                              | 0.01%+40mV                              |
| Line Regulation(Current)                       | 30mA  | 30mA                                    | 15mA                                    | 20mA                                    |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |   |   |   |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |   |   |   |
| DVM Resolution                                 | 1mV   | 1mV                                     | 12mV                                    | 12mV                                    |
| DVM Precision <sup>[1]</sup>                   | 0.1%+15mV   | 0.1%+15mV                               | 0.05%+150mV                             | 0.05%+200mV                             |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |   |   |   |
| Remote Compensation                            | 5V MAX  |   |   |   |
| Master-slave Control                           | Yes   |   |   |   |
| Response (Voltage Increase)                    | ≤25ms   | ≤30ms                                   | ≤60ms                                   | ≤60ms                                   |
| Response (Voltage Drop)                        | ≤500ms (no load)<br>≤25ms (full load)   | ≤500ms (no load)<br>≤20ms (full load)   | ≤800ms (no load)<br>≤90ms (full load)   | ≤800ms (no load)<br>≤60ms (full load)   |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤3ms  |   |   |   |
| Command Response Time                          | 50ms  |   |   |   |
| Series Capability <sup>[6]</sup>               | Up to 8 units   | Up to 6 units                           | Up to 2 units                           | Not Recommended                         |
| Parallel Capability                            | Up to 10 units  |   |   |   |
| Current Sharing <sup>[7]</sup>                 | 40V   | 50V                                     | 200V                                    | 250V                                    |
| Efficiency (full load)                         | 90%   | 90%                                     | 90%                                     | 91%                                     |
| <b>OTHER</b>                                   |   |   |   |   |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |   |   |   |
| Fold Back Function                             | Yes   |   |   |   |
| Input Fuse                                     | 30A, 125VAC/250VAC,<br>fast-acting type   | 30A, 125VAC/250VAC,<br>fast-acting type | 20A, 125VAC/250VAC,<br>fast-acting type | 20A, 125VAC/250VAC,<br>fast-acting type |
| Net Weight                                     | 13.2kg  | 13.2kg                                  | 14.7kg                                  | 14.7kg                                  |
| Accessories Weight                             | 1.0kg   |   |   |   |
| Dimensions(WxHxD)                              | 483.0x87.0x581.0 mm   | 483.0x87.0x581.0 mm                     | 483.0x87.0x626.0 mm                     | 483.0x87.0x626.0 mm                     |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |   |   |   |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |   |   |   |
| Cooling Mode                                   | Forced air-cooling  |   |   |   |
| Altitude                                       | 2000m   |   |   |   |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $le<(\text{Iav} \cdot 2.5\% + 5\% \text{ F.S}) \text{ A}$ , F.S is the full scale of the current.  $\text{Iav} = \text{Isum}/n$ , where Iav is average current, Isum is total current and n is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.



Efficiency, Stability, Reliable, Precision

# Wide-range Programmable DC power Supply

## 3000W in 2U(1)

| Model  | SP32VDC3000W  | SP40VDC3000W                           | SP80VDC3000W                          | SP120VDC3000W                         |
|--|---|--|---------------------------------------|---------------------------------------|
| <b>INPUT</b>                                   |   |  |                                       |                                       |
| Input Voltage                                  | 190~265VAC  |  |                                       |                                       |
| Input Frequency                                | 47~63Hz   |  |                                       |                                       |
| Power Factor                                   | >0.98   |  |                                       |                                       |
| Input Power                                    | 3700VA(MAX)   | 3400VA(MAX)                            | 3400VA(MAX)                           | 3400VA(MAX)                           |
| <b>OUTPUT</b>                                  |   |  |                                       |                                       |
| Output Voltage Range                           | 0~32V   | 0~40V                                  | 0~80V                                 | 0~120V                                |
| Output Current Range                           | 0~200A  | 0~120A                                 | 0~60A                                 | 0~40A                                 |
| Output Power Range                             | 0~3000W   |  |                                       |                                       |
| Voltage Load Regulation                        | 30mV  | 15mV                                   | 15mV                                  | 15mV                                  |
| Current Load Regulation                        | 200mA   | 120mA                                  | 60mA                                  | 40mA                                  |
| Voltage Display Resolution                     | 0.1mV   | 0.1mV                                  | 0.1mV                                 | 1mV                                   |
| Current Display Resolution                     | 1mA   | 1mA                                    | 0.2mA                                 | 0.1mA                                 |
| Voltage Programmable Resolution                | 1mV   | 1mV                                    | 1.5mV                                 | 3mV                                   |
| Current Programmable Resolution                | 6mA   | 2mA                                    | 2mA                                   | 1mA                                   |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.05%+15mV  | 0.05%+15mV                             | 0.05%+15mV                            | 0.1%+15mV                             |
| Current Setting Accuracy                       | 0.1%+200mA  | 0.1%+120mA                             | 0.1%+60mA                             | 0.1%+40mA                             |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.05%+15mV  | 0.05%+15mV                             | 0.05%+15mV                            | 0.1%+15mV                             |
| Current Measurement Accuracy                   | 0.1%+200mA  | 0.1%+120mA                             | 0.1%+60mA                             | 0.1%+40mA                             |
| Voltage Ripple <sup>[2]</sup>                  | 60mVp-p<br>10mVrms  | 40mVp-p<br>6mVrms                      | 40mVp-p<br>6mVrms                     | 80mVp-p<br>15mVrms                    |
| Current Ripple <sup>[3]</sup>                  | 400mA (Full Range)<br>200mA (TYP Value)   | 150mA (Full Range)<br>20mA (TYP Value) | 50mA (Full Range)<br>10mA (TYP Value) | 60mA (Full Range)<br>10mA (TYP Value) |
| Line Regulation(Voltage)                       | 0.01%+8mV   | 0.01%+8mV                              | 0.01%+8mV                             | 0.02%+8mV                             |
| Line Regulation(Current)                       | 200mA   | 30mA                                   | 30mA                                  | 30mA                                  |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |  |                                       |                                       |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |  |                                       |                                       |
| DVM Resolution                                 | 0.1mV   | 0.1mV                                  | 0.1mV                                 | 1mV                                   |
| DVM Precision <sup>[1]</sup>                   | 0.05%+15mV  | 0.05%+15mV                             | 0.05%+15mV                            | 0.1%+15mV                             |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |  |                                       |                                       |
| Remote Compensation                            | 4V MAX  | 4V MAX                                 | 4V MAX                                | 5V MAX                                |
| Master-slave Control                           | Yes   |  |                                       |                                       |
| Response (Voltage Increase)                    | ≤20ms (no load)<br>≤20ms (full load)  | ≤10ms                                  | ≤15ms                                 | ≤20ms                                 |
| Response (Voltage Drop)                        | ≤500ms (no load)<br>≤25ms (full load)   | ≤350ms (no load)<br>≤10ms (full load)  | ≤450ms (no load)<br>≤30ms (full load) | ≤350ms (no load)<br>≤21ms (full load) |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2ms  |  |                                       |                                       |
| Command Response Time                          | 50ms  |  |                                       |                                       |
| Series Capability <sup>[6]</sup>               | Up to 10 units  |  |                                       |                                       |
| Parallel Capability                            | Up to 10 units  |  |                                       |                                       |
| Current Sharing <sup>[7]</sup>                 | 12V   | 12V                                    | 20V                                   | 30V                                   |
| Efficiency (full load)                         | 91%   | 88%                                    | 91%                                   | 91%                                   |
| <b>OTHER</b>                                   |   |  |                                       |                                       |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |  |                                       |                                       |
| Fold Back Function                             | No(customers can purchase other accessories to achieve this function, please consult the salesrepresentative for details) | Yes                                    | Yes                                   | Yes                                   |
| Input Fuse                                     | 30A, 125VAC/250VAC, fast-acting type  | 40A, 125VAC/250VAC, fast-acting type   | 40A, 125VAC/250VAC, fast-acting type  | 40A, 125VAC/250VAC, fast-acting type  |
| Net Weight                                     | 14.7kg  | 14.7kg                                 | 13.2kg                                | 13.2kg                                |
| Accessories Weight                             | 1.0kg   |  |                                       |                                       |
| Dimensions(WxHxD)                              | 483.0x87.0x626.0 mm   | 483.0x87.0x626.0 mm                    | 483.0x87.0x581.0 mm                   | 483.0x87.0x581.0 mm                   |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |  |                                       |                                       |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |  |                                       |                                       |
| Cooling Mode                                   | Forced air-cooling  |  |                                       |                                       |
| Altitude                                       | 2000m   |  |                                       |                                       |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $I_{e} < (I_{av} \cdot 2.5\% + 5\% \cdot F.S) A$ , **F.S** is the full scale of the current.  $I_{av} = I_{sum}/n$ , where  $I_{av}$  is average current,  $I_{sum}$  is total current and  $n$  is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.



# Wide-range Programmable DC power Supply

## ■ 3000W in 2U(2)

| Model  | SP150VDC3000W   | SP200VDC3000W                           | SP600VDC3000W                           | SP800VDC3000W                           |
|--|---|---|---|---|
| <b>INPUT</b>                                   |   |   |   |   |
| Input Voltage                                  | 190~265VAC  |   |   |   |
| Input Frequency                                | 47~63Hz   |   |   |   |
| Power Factor                                   | >0.98   |   |   |   |
| Input Power                                    | 3400VA(MAX)   |   |   |   |
| <b>OUTPUT</b>                                  |   |   |   |   |
| Output Voltage Range                           | 0~150V  | 0~200V                                  | 0~600V                                  | 0~800V                                  |
| Output Current Range                           | 0~30A   | 0~24A                                   | 0~10A                                   | 0~7.5A                                  |
| Output Power Range                             | 0~3000W   |   |   |   |
| Voltage Load Regulation                        | 15mV  | 15mV                                    | 30mV                                    | 200mV                                   |
| Current Load Regulation                        | 30mA  | 24mA                                    | 10mA                                    | 20mA                                    |
| Voltage Display Resolution                     | 1mV   |   |   |   |
| Current Display Resolution                     | 0.1mA   |   |   |   |
| Voltage Programmable Resolution                | 3mV   | 4mV                                     | 12mV                                    | 24mV                                    |
| Current Programmable Resolution                | 1mA   |   |   |   |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.1%+15mV   | 0.1%+15mV                               | 0.05%+150mV                             | 0.05%+200mV                             |
| Current Setting Accuracy                       | 0.1%+30mA   | 0.1%+24mA                               | 0.1%+10mA                               | 0.1%+7.5mA                              |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.1%+15mV   | 0.1%+15mV                               | 0.05%+150mV                             | 0.05%+200mV                             |
| Current Measurement Accuracy                   | 0.1%+30mA   | 0.1%+24mA                               | 0.1%+10mA                               | 0.1%+7.5mA                              |
| Voltage Ripple <sup>[2]</sup>                  | 80mVp-p<br>15mVrms  | 150mVp-p<br>30mVrms                     | 350mVp-p<br>40mVrms                     | 800mVp-p<br>200mVrms                    |
| Current Ripple <sup>[3]</sup>                  | 60mA (Full Range)<br>10mA (TYP Value)   | 50mA (Full Range)<br>20mA (TYP Value)   | 25mA (Full Range)<br>10mA (TYP Value)   | 25mA (Full Range)<br>10mA (TYP Value)   |
| Line Regulation(Voltage)                       | 0.02%+8mV   | 0.02%+8mV                               | 0.01%+30mV                              | 0.01%+40mV                              |
| Line Regulation(Current)                       | 30mA  | 30mA                                    | 15mA                                    | 20mA                                    |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |   |   |   |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |   |   |   |
| DVM Resolution                                 | 1mV   | 1mV                                     | 12mV                                    | 12mV                                    |
| DVM Precision <sup>[1]</sup>                   | 0.1%+15mV   | 0.1%+15mV                               | 0.05%+150mV                             | 0.05%+200mV                             |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |   |   |   |
| Remote Compensation                            | 5V MAX  |   |   |   |
| Master-slave Control                           | Yes   |   |   |   |
| Response (Voltage Increase)                    | ≤25ms   | ≤30ms                                   | ≤60ms                                   | ≤60ms                                   |
| Response (Voltage Drop)                        | ≤500ms (no load)<br>≤25ms (full load)   | ≤500ms (no load)<br>≤20ms (full load)   | ≤800ms (no load)<br>≤75ms (full load)   | ≤800ms (no load)<br>≤60ms (full load)   |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2.5ms  | ≤3ms                                    | ≤3ms                                    | ≤3ms                                    |
| Command Response Time                          | 50ms  |   |   |   |
| Series Capability <sup>[6]</sup>               | Up to 8 units   | Up to 6 units                           | Up to 2 units                           | Not Recommended                         |
| Parallel Capability                            | Up to 10 units  |   |   |   |
| Current Sharing <sup>[7]</sup>                 | 40V   | 50V                                     | 200V                                    | 250V                                    |
| Efficiency (full load)                         | 92%   | 91%                                     | 91%                                     | 91%                                     |
| <b>OTHER</b>                                   |   |   |   |   |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |   |   |   |
| Fold Back Function                             | Yes   |   |   |   |
| Input Fuse                                     | 40A, 125VAC/250VAC,<br>fast-acting type   | 40A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type | 30A, 125VAC/250VAC,<br>fast-acting type |
| Net Weight                                     | 13.2kg  | 13.2kg                                  | 14.7kg                                  | 14.7kg                                  |
| Accessories Weight                             | 1.0kg   |   |   |   |
| Dimensions(WxHxD)                              | 483.0x87.0x581.0 mm   | 483.0x87.0x581.0 mm                     | 483.0x87.0x626.0 mm                     | 483.0x87.0x626.0 mm                     |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |   |   |   |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |   |   |   |
| Cooling Mode                                   | Forced air-cooling  |   |   |   |
| Altitude                                       | 2000m   |   |   |   |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $le<(\text{Iav} \cdot 2.5\% + 5\% \text{ F.S}) \text{ A}$ , F.S is the full scale of the current.  $\text{Iav} = \text{Isum}/n$ , where Iav is average current, Isum is total current and n is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# Wide-range Programmable DC power Supply

## 4000W in 2U(1)

| Model  | SP32VDC4000W  | SP40VDC4000W                           | SP75VDC4000W                          | SP120VDC4000W                         |
|--|---|--|---------------------------------------|---------------------------------------|
| <b>INPUT</b>                                   |   |  |                                       |                                       |
| Input Voltage                                  | 190~265VAC  |  |                                       |                                       |
| Input Frequency                                | 47~63Hz   |  |                                       |                                       |
| Power Factor                                   | >0.98   |  |                                       |                                       |
| Input Power                                    | 4800VA(MAX)   | 4500VA(MAX)                            | 4500VA(MAX)                           | 4500VA(MAX)                           |
| <b>OUTPUT</b>                                  |   |  |                                       |                                       |
| Output Voltage Range                           | 0~32V   | 0~40V                                  | 0~75V                                 | 0~120V                                |
| Output Current Range                           | 0~200A  | 0~120A                                 | 0~60A                                 | 0~40A                                 |
| Output Power Range                             | 0~4000W   |  |                                       |                                       |
| Voltage Load Regulation                        | 30mV  | 15mV                                   | 15mV                                  | 15mV                                  |
| Current Load Regulation                        | 200mA   | 120mA                                  | 60mA                                  | 40mA                                  |
| Voltage Display Resolution                     | 0.1mV   | 0.1mV                                  | 0.1mV                                 | 1mV                                   |
| Current Display Resolution                     | 1mA   | 1mA                                    | 0.1mA                                 | 0.1mA                                 |
| Voltage Programmable Resolution                | 1mV   | 1mV                                    | 2mV                                   | 3mV                                   |
| Current Programmable Resolution                | 6mA   | 3mA                                    | 2mA                                   | 1mA                                   |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.05%+15mV  | 0.05%+15mV                             | 0.1%+15mV                             | 0.1%+15mV                             |
| Current Setting Accuracy                       | 0.1%+200mA  | 0.1%+120mA                             | 0.1%+60mA                             | 0.1%+40mA                             |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.05%+15mV  | 0.05%+15mV                             | 0.1%+15mV                             | 0.1%+15mV                             |
| Current Measurement Accuracy                   | 0.1%+200mA  | 0.1%+120mA                             | 0.1%+60mA                             | 0.1%+40mA                             |
| Voltage Ripple <sup>[2]</sup>                  | 60mVp-p<br>10mVrms  | 40mVp-p<br>6mVrms                      | 40mVp-p<br>8mVrms                     | 80mVp-p<br>15mVrms                    |
| Current Ripple <sup>[3]</sup>                  | 400mA (Full Range)<br>200mA (TYP Value)   | 150mA (Full Range)<br>20mA (TYP Value) | 60mA (Full Range)<br>10mA (TYP Value) | 60mA (Full Range)<br>10mA (TYP Value) |
| Line Regulation(Voltage)                       | 0.01%+8mV   | 0.01%+8mV                              | 0.01%+8mV                             | 0.02%+8mV                             |
| Line Regulation(Current)                       | 200mA   | 30mA                                   | 30mA                                  | 30mA                                  |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |  |                                       |                                       |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |  |                                       |                                       |
| DVM Resolution                                 | 0.1mV   | 0.1mV                                  | 0.1mV                                 | 1mV                                   |
| DVM Precision <sup>[1]</sup>                   | 0.05%+15mV  | 0.05%+15mV                             | 0.05%+15mV                            | 0.1%+15mV                             |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |  |                                       |                                       |
| Remote Compensation                            | 4V MAX  | 4V MAX                                 | 5V MAX                                | 5V MAX                                |
| Master-slave Control                           | Yes   |  |                                       |                                       |
| Response (Voltage Increase)                    | ≤20ms (no load)<br>≤20ms (full load)  | ≤10ms                                  | ≤15ms                                 | ≤20ms                                 |
| Response (Voltage Drop)                        | ≤500ms (no load)<br>≤20ms (full load)   | ≤350ms (no load)<br>≤10ms (full load)  | ≤450ms (no load)<br>≤20ms (full load) | ≤350ms (no load)<br>≤21ms (full load) |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2ms  |  |                                       |                                       |
| Command Response Time                          | 50ms  |  |                                       |                                       |
| Series Capability <sup>[6]</sup>               | Up to 10 units  |  |                                       |                                       |
| Parallel Capability                            | Up to 10 units  |  |                                       |                                       |
| Current Sharing <sup>[7]</sup>                 | 12V   | 12V                                    | 20V                                   | 30V                                   |
| Efficiency (full load)                         | 91%   | 91%                                    | 91%                                   | 92%                                   |
| <b>OTHER</b>                                   |   |  |                                       |                                       |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |  |                                       |                                       |
| Fold Back Function                             | No(customers can purchase other accessories to achieve this function, please consult the salesrepresentative for details) | Yes                                    | Yes                                   | Yes                                   |
| Input Fuse                                     | 40A, 125VAC/250VAC, fast-acting type  |  |                                       |                                       |
| Net Weight                                     | 14.7kg  | 14.7kg                                 | 13.2kg                                | 13.2kg                                |
| Accessories Weight                             | 1.0kg   |  |                                       |                                       |
| Dimensions(WxHxD)                              | 483.0x87.0x626.0 mm   | 483.0x87.0x626.0 mm                    | 483.0x87.0x581.0 mm                   | 483.0x87.0x581.0 mm                   |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |  |                                       |                                       |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |  |                                       |                                       |
| Cooling Mode                                   | Forced air-cooling  |  |                                       |                                       |
| Altitude                                       | 2000m   |  |                                       |                                       |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $le<(\text{Iav} \cdot 2.5\% + 5\% \text{ F.S}) \text{ A}$ , F.S is the full scale of the current.  $\text{Iav} = \text{Isum}/n$ , where Iav is average current, Isum is total current and n is number of parallel units.

Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

# Wide-range Programmable DC power Supply

## 4000W in 2U(2)

| Model  | SP150VDC4000W   | SP200VDC4000W                         | SP600VDC4000W                         | SP800VDC4000W                         |
|--|---|---------------------------------------|---------------------------------------|---------------------------------------|
| <b>INPUT</b>                                   |   |                                       |                                       |                                       |
| Input Voltage                                  | 190~265VAC  |                                       |                                       |                                       |
| Input Frequency                                | 47~63Hz   |                                       |                                       |                                       |
| Power Factor                                   | >0.98   |                                       |                                       |                                       |
| Input Power                                    | 4500VA(MAX)   |                                       |                                       |                                       |
| <b>OUTPUT</b>                                  |   |                                       |                                       |                                       |
| Output Voltage Range                           | 0~150V  | 0~200V                                | 0~600V                                | 0~800V                                |
| Output Current Range                           | 0~30A   | 0~24A                                 | 0~10A                                 | 0~7.5A                                |
| Output Power Range                             | 0~4000W   |                                       |                                       |                                       |
| Voltage Load Regulation                        | 15mV  | 25mV                                  | 30mV                                  | 200mV                                 |
| Current Load Regulation                        | 30mA  | 24mA                                  | 10mA                                  | 20mA                                  |
| Voltage Display Resolution                     | 1mV   |                                       |                                       |                                       |
| Current Display Resolution                     | 0.1mA   |                                       |                                       |                                       |
| Voltage Programmable Resolution                | 3mV   | 4mV                                   | 12mV                                  | 24mV                                  |
| Current Programmable Resolution                | 1mA   |                                       |                                       |                                       |
| Voltage Setting Accuracy <sup>[1]</sup>        | 0.1%+15mV   | 0.1%+15mV                             | 0.05%+150mV                           | 0.05%+200mV                           |
| Current Setting Accuracy                       | 0.1%+30mA   | 0.1%+24mA                             | 0.1%+10mA                             | 0.1%+7.5mA                            |
| Voltage Measurement Accuracy <sup>[1]</sup>    | 0.1%+15mV   | 0.1%+15mV                             | 0.05%+150mV                           | 0.05%+200mV                           |
| Current Measurement Accuracy                   | 0.1%+30mA   | 0.1%+24mA                             | 0.1%+10mA                             | 0.1%+7.5mA                            |
| Voltage Ripple <sup>[2]</sup>                  | 80mVp-p<br>15mVrms  | 150mVp-p<br>30mVrms                   | 350mVp-p<br>40mVrms                   | 800mVp-p<br>200mVrms                  |
| Current Ripple <sup>[3]</sup>                  | 60mA (Full Range)<br>10mA (TYP Value)   | 50mA (Full Range)<br>20mA (TYP Value) | 25mA (Full Range)<br>10mA (TYP Value) | 25mA (Full Range)<br>10mA (TYP Value) |
| Line Regulation(Voltage)                       | 0.02%+8mV   | 0.02%+8mV                             | 0.01%+30mV                            | 0.01%+40mV                            |
| Line Regulation(Current)                       | 30mA  | 30mA                                  | 15mA                                  | 20mA                                  |
| Voltage Temperature Coefficient <sup>[4]</sup> | 100ppm/°C   |                                       |                                       |                                       |
| Current Temperature Coefficient <sup>[4]</sup> | 150ppm/°C   |                                       |                                       |                                       |
| DVM Resolution                                 | 1mV   | 1mV                                   | 12mV                                  | 12mV                                  |
| DVM Precision <sup>[1]</sup>                   | 0.1%+15mV   | 0.1%+15mV                             | 0.05%+150mV                           | 0.05%+200mV                           |
| Operating Mode                                 | Constant voltage (CV) / Constant current (CC)   |                                       |                                       |                                       |
| Remote Compensation                            | 5V MAX  |                                       |                                       |                                       |
| Master-slave Control                           | Yes   |                                       |                                       |                                       |
| Response (Voltage Increase)                    | ≤25ms   | ≤30ms                                 | ≤60ms                                 | ≤60ms                                 |
| Response (Voltage Drop)                        | ≤500ms (no load)<br>≤25ms (full load)   | ≤500ms (no load)<br>≤20ms (full load) | ≤800ms (no load)<br>≤60ms (full load) | ≤800ms (no load)<br>≤60ms (full load) |
| Load Transient Recovery Time <sup>[5]</sup>    | ≤2.5ms  | ≤3ms                                  | ≤3ms                                  | ≤3ms                                  |
| Command Response Time                          | 50ms  |                                       |                                       |                                       |
| Series Capability <sup>[6]</sup>               | Up to 8 units   | Up to 6 units                         | Up to 2 units                         | Not Recommended                       |
| Parallel Capability                            | Up to 10 units  |                                       |                                       |                                       |
| Current Sharing <sup>[7]</sup>                 | 40V   | 50V                                   | 200V                                  | 250V                                  |
| Efficiency (full load)                         | 93%   | 92%                                   | 92%                                   | 92%                                   |
| <b>OTHER</b>                                   |   |                                       |                                       |                                       |
| Protection Function                            | OVP/OCP/OTP/OPP/SCP   |                                       |                                       |                                       |
| Fold Back Function                             | Yes   |                                       |                                       |                                       |
| Input Fuse                                     | 40A, 125VAC/250VAC, fast-acting type  |                                       |                                       |                                       |
| Net Weight                                     | 13.2kg  | 13.2kg                                | 14.7kg                                | 14.7kg                                |
| Accessories Weight                             | 1.0kg   |                                       |                                       |                                       |
| Dimensions(WxHxD)                              | 483.0x87.0x581.0 mm   | 483.0x87.0x581.0 mm                   | 483.0x87.0x626.0 mm                   | 483.0x87.0x626.0 mm                   |
| Communication Modes                            | 1. RS232/RS485/USB/LAN; 2. RS232/RS485/USB/LAN/GPIB   |                                       |                                       |                                       |
| Operating Environment                          | Temperature 0~40°C, Relative Humidity 10%~90%(no condensation); Pollution degree 2, Installation category II, Indoor use. |                                       |                                       |                                       |
| Cooling Mode                                   | Forced air-cooling  |                                       |                                       |                                       |
| Altitude                                       | 2000m   |                                       |                                       |                                       |

[1] %output+offset, when output voltage less than 5V, offset voltage is 30mV.

[2] Vp-p@20MHz, Vrms@1.25MHz.

The 20V/32V/40V/75V models voltage ripple is 50mVp-p/6mVrms @ 1V. For the 600V and 800V models, the voltage ripple from 0~5V is out of the range show above.

[3] Arms@1.25MHz, the TYP Value is measured at the rated output voltage with 100% resistive load, and the measured value at full range of output voltage with 100% resistive load is less than the Full Range value.

[4] 0~40°C.

[5] Time for output voltage to recover within 0.5%(0.75% @800V models) of its rated output for a load change from 10% to 90% of its rated output current. Voltage set point from 10% to 90% of rated output.

[6] The communication must insulated users from output when using remote control and the output voltage exceeds 800VDC.

[7] Current Share error  $le<(\text{Iav} \cdot 2.5\% + 5\% \text{ F.S}) \text{ A}$ , F.S is the full scale of the current.  $\text{Iav} = \text{Isum}/n$ , where Iav is average current, Isum is total current and n is number of parallel units. Note: Output voltage must be higher than 30% of maximum output voltage when Current Share function properly.

All specifications are subject to change without notice.

APM Technologies (Dongguan) Co., Ltd

Add: #7, Link Information Industry Park, Shuilianshan Road,  
Nancheng, Dongguan, Guangdong, China

Tel: +86 769-2202 8588 ext:2892 Fax: +86 769-2202 6771

E-mail: [overseas@apmtech.cn](mailto:overseas@apmtech.cn) Web: [en.apmtech.cn](http://en.apmtech.cn)

